

THE KINNEAR MANUFACTURING COMPANY
OF CALIFORNIA

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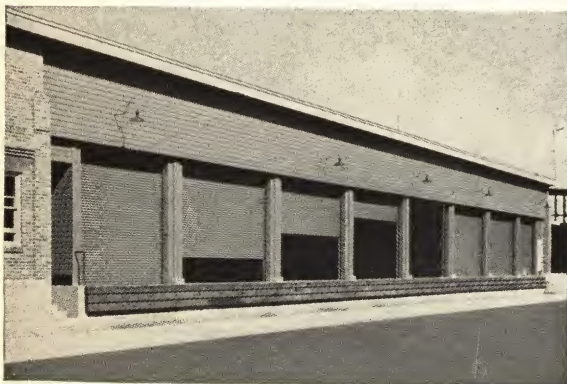
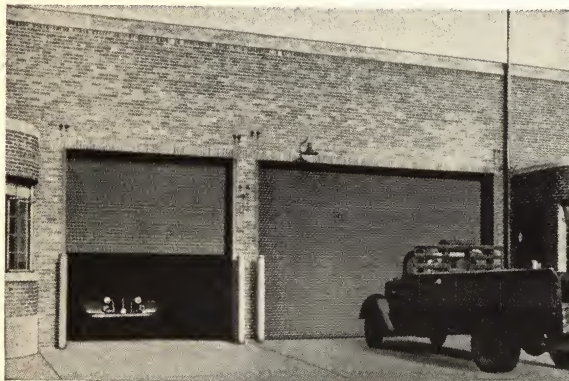
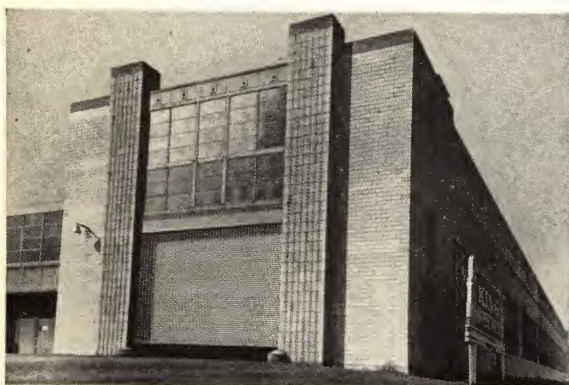
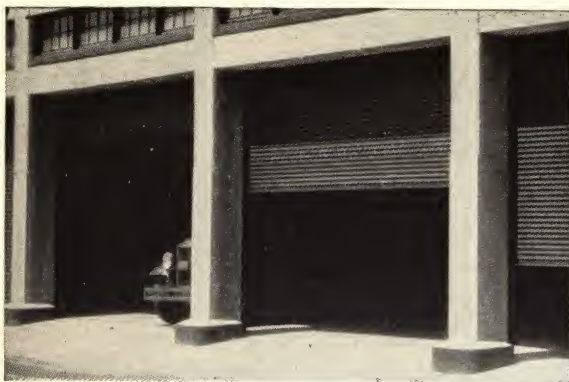


KINNEAR ROLLING DOORS

SAVINGWAYS
in
DOORWAYS

A.I.A. File No. 16-D-13

facilities and services



■ BASIC factors influencing the purchase of equipment are the reputation and experience of the manufacturer. Almost a half century ago the Kinnear Manufacturing Company was founded for the sole purpose of manufacturing doors and door-operating equipment. Today Kinnear is recognized as the pioneer in the field of upward-opening door equipment, with an unequalled accumulation of experience to produce doors of superior value . . . making the word "Kinnear" practically synonymous with "doors" the world over.

Constant development by skilled engineers has brought improved designs of doors, slats, operators and accessories. Research has found better materials, of less weight but greater strength, longer wear and greater resistance to the elements.

To specify Kinnear doors means more than the selection of a superior product . . . it is the assurance of a complete door service. The Kinnear Organization assumes responsibility at the time they are delegated to study the opening problem. A staff of experienced door engineers design the door to most efficiently meet the conditions of the particular requirements. After installation, Kinnear is still ready to help, as a record of every door sold is kept in a fire-proof vault to facilitate the prompt furnishing of any part that may at any time suffer damage.

A nation-wide organization of engineers and service representatives is available to assist architects, contractors and owners in obtaining the most suitable type of upward-acting door for the opening.

what Kinnear service means

. . . to the architect

It assures him that when he is considering Kinnear equipment he has the willing cooperation of specialists in door construction and uses, who will assist him in selecting the door best suited to his client's requirements. Available to him are Kinnear's accumulated experience and the necessary data to make preliminary sketches and estimates as well as to prepare final drawings and specifications. His interest and Kinnear's are identical—to have a satisfied client.

. . . to the contractor

Over long years the contractor has learned that Kinnear understands his problems. He knows that estimates will be prompt and accurate; that working drawings will check with the equipment when received so that it will fit properly into the space provided; and that a trained erection crew is available. Relief from responsibility, speedy installation and satisfied clients give the contractor every confidence in accepting a Kinnear bid.

. . . to the owner

The care on Kinnear's own part in proper selection and fabrication, and the cooperative service provided for the architect and contractor, assures the owner that his interests are being looked after. It is Kinnear's aim that every door should give long dependable service with the minimum of maintenance. Doors still in service after more than thirty years are evidence that owners of Kinnear Doors obtain even more than value received.

steel rolling door advantages

Beside the convenience, low cost of maintenance and reliability of manufacture, advantages briefly listed below are the most important of those for which Kinnear Rolling Doors are universally endorsed.

When selecting a steel rolling door the architect, engineer or owner should give careful consideration to the requirements which that door must meet in actual operation. The nine major requirements are listed below for the convenience of the specifiers. Any door should be studied as to its qualifications for meeting these conditions.

Kinnear doors meet these nine major requirements

1 quick, easy operation

Open upward; permanently counterbalanced; operate smoothly, clearing all ground obstructions.

2 space saving

Stowed overhead when open—they take up no desirable floor or wall space.

3 greater durability

When open, doors cannot be damaged by moving objects and are protected from wind and the elements. Their fabrication enables them to withstand abuse, insuring practically immeasurable life.

4 fire protection

All Kinnear Steel Doors are fire resisting. However, Kinnear Automatic Fire Doors (Underwriters' Labeled) are recommended when fire protection is of primary importance.

5 maximum safety

Springs individually tested. Automatic doors provided with a governor safety device in addition to other special safety features.

6 weather protection

Curtains or panels constructed of weather-resisting materials and given a high grade protective coating.

7 neat appearance

Harmonize with architectural treatment of any building. Where possible, parts are concealed and mechanism inconspicuously arranged.

8 burglar protection

Strong construction makes them barriers against thieves, marauders or rioters. Secure locking provided.

9 economical installation

Designed for rapid, economical installation with minimum opening preparation, on new or old buildings.

THE KINNEAR MANUFACTURING CO. OF CALIFORNIA

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San Francisco 24, California

WESTERN REPRESENTATIVES

ARIZONA

Phoenix: Foxworth-McCalla Lumber Co., Box 3617, Ph. 3-5183
Tucson: Chapman-Dyer Steel Mfg. Company, 1202 N. 12th Avenue, Ph. 8868

CALIFORNIA

Los Angeles: Kenneth C. Gaines, 1121 S. Hill St., Ph. PRospect 1451
San Diego: Andrew N. Baird, 1761 Kettner Blvd., Ph. Main 7173
San Jose: Harold Hellwig, 150 S. Montgomery St., Ph. Ballard 7766
Sacramento: Wagner Sheet Metal, 22nd & S Sts., Ph. Sacramento 64726

Fresno: Kyle & Co., Inc., 346 G St., Ph. 4-4651

Stockton: Kyle & Co., Inc., 348 Harrison St., Ph. 7-7831

Bakersfield: G. H. Slack & Son, 1800 S. Chester Avenue, Ph. 2-2985

NEVADA

Reno: Reno Iron Works, 234 Chestnut St., Ph. 3671

OREGON

Portland: Mercer Steel Co., Inc., 2555 N. W. Nicolai St., Ph. Atwater 0141

UTAH

Salt Lake City: Williams, Gritton & Wilde, 204 Dooly Bldg., Ph. Salt Lake 46421

WASHINGTON

Seattle 22: Fryer-Knowles, 1718 Broadway, Ph. Capitol 0800
Spokane: Fryer-Ford, Peyton Bldg., Ph. Main 4453

HAWAII

Honolulu: Honolulu Iron Works Co., Nuuanu & Queen Sts., Ph. Honolulu 1201

THE NEW KINNEAR FACTORY AT SAN FRANCISCO

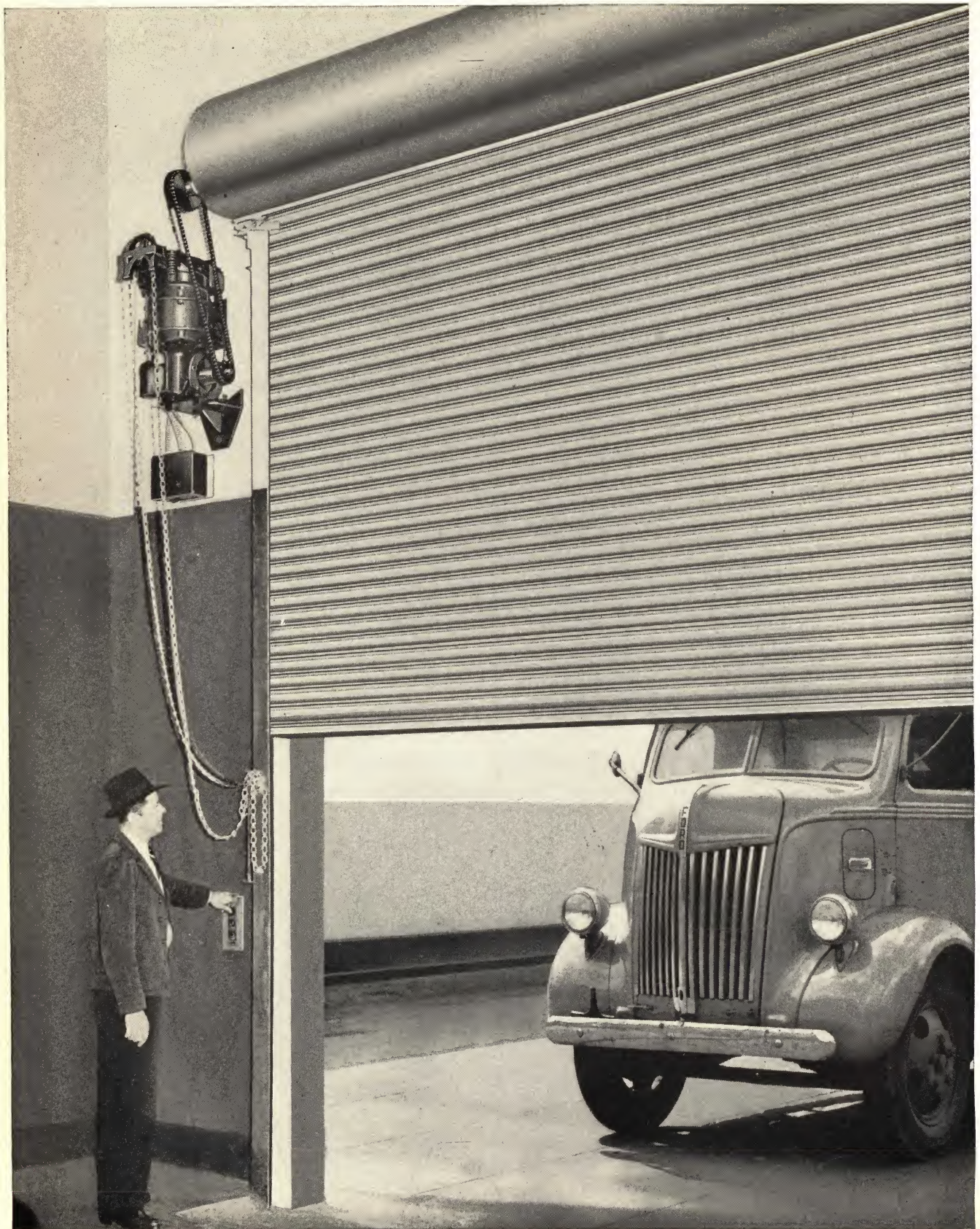


Recognizing the needs of the West, our first Western factory was established in 1930. During 1941, a new, modern plant was constructed and occupied.

Like the Columbus, Ohio, plant it contains the most up-to-date manufacturing facilities for designing, fabricating, installing and servicing all types of rolling doors in both metal and wood. It affords Western Buyers the type of prompt and experienced door service that has made the name "Kinnear" synonymous with "Doors" for a half century.

KINNEAR
ROLLING DOORS

steel rolling service doors



non-labeled doors

Kinnear Service Doors are "every day" doors for general use which may require opening occasionally or several times a day. They are designed to serve in openings that do not require Underwriter's Labeled fire doors and where fire protection is not a major consideration. They offer protection against intruders and weather, and are to some extent fire resisting, preventing the spread of small fires or delaying the spread of large ones.

long life—low upkeep

Made to your exact requirements, Kinnear Doors insure maximum economy of installation, trouble-free operation and long life, with low maintenance cost. The Kinnear "Complete Door Service" policy, combines designing skill, competent workmanship, best of materials, individual fabrication, plant assembly and trained installation crews. If replacement of any part is ever necessary, your door is registered and plans kept in fireproof vaults, making parts quickly and easily available.

features

The curtain proper of Kinnear Service Doors is constructed of open-hearth, steel interlocking slats, galvanized with pure zinc, and equipped with endlocks of suitable material. It may also be of other metals and coatings. This curtain is coiled upon a barrel journaled in heavy cast iron (or steel plate brackets where necessary on very large doors) and travels in steel guides. Helical springs enclosed in the barrel provide counterbalancing. A metal hood covers barrel and coil.

standard types, sizes and limitations

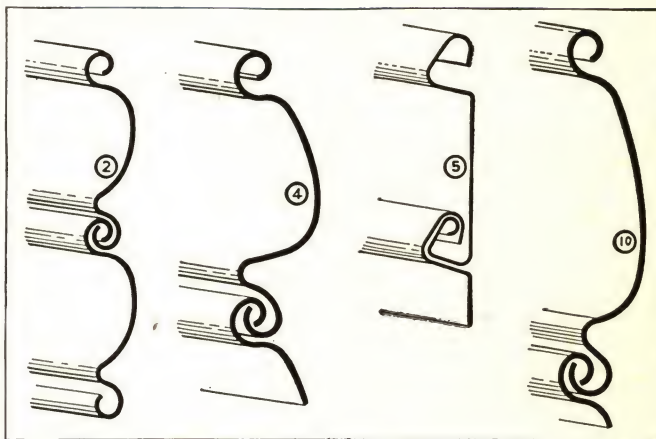
Kinnear Service Doors are offered in several standard types based on two methods of installation and four of operation. Installation may be 1) Between-the-jamb, where door mechanism is encased under the lintel and 2) Face-of-wall, where the brackets and coil are mounted and encased on the face of the wall. Operations may be (1) Manual Push-up by means of handle in bottom bar, (2) Mechanically by hand chains working through sprockets and reduction gears, (3) Mechanically by hand crank operated on shaft and reduction gearing; and (4) Electrically by a power operator, controlled by one or more push buttons or other means. While manual operation is used for small doors, mechanical operation is recommended for those over 80 square feet in area. In view of the saving in time, labor and convenience afforded by motor control, it is now most frequently used.

As each door is built for a specific job it can be made any reasonable size, limited only by what is practical from an engineering and operating standpoint.

service type doors

construction features

slats



Interlocking slats were originated by Kinnear. There are only a few old corrugated iron rolling doors in existence today, but at one time a corrugated sheet coiled up on a pipe was the only rolling curtain known. W. R. Kinnear originated the interlocking slat curtain and organized The Kinnear Manufacturing Company.

In the development of the rolling door this original slat design has been modified and improved, but the original features have been maintained. These features are incorporated in the Kinnear slats No. 2, No. 4, and No. 10.

These three sections include the following important features:

1. Water shedding assembly.
2. Reversibility.
3. Resistance to both horizontal and vertical forces.
4. Resiliency.
5. Free acting joints.
6. Compressibility.
7. Pleasing appearance.

Slats are rolled from sheet metal which has been hot dip galvanized by a special process. They are made in different weights and in a number of styles. Also they can be furnished in aluminum and other metals. Details submitted upon request.

operating methods

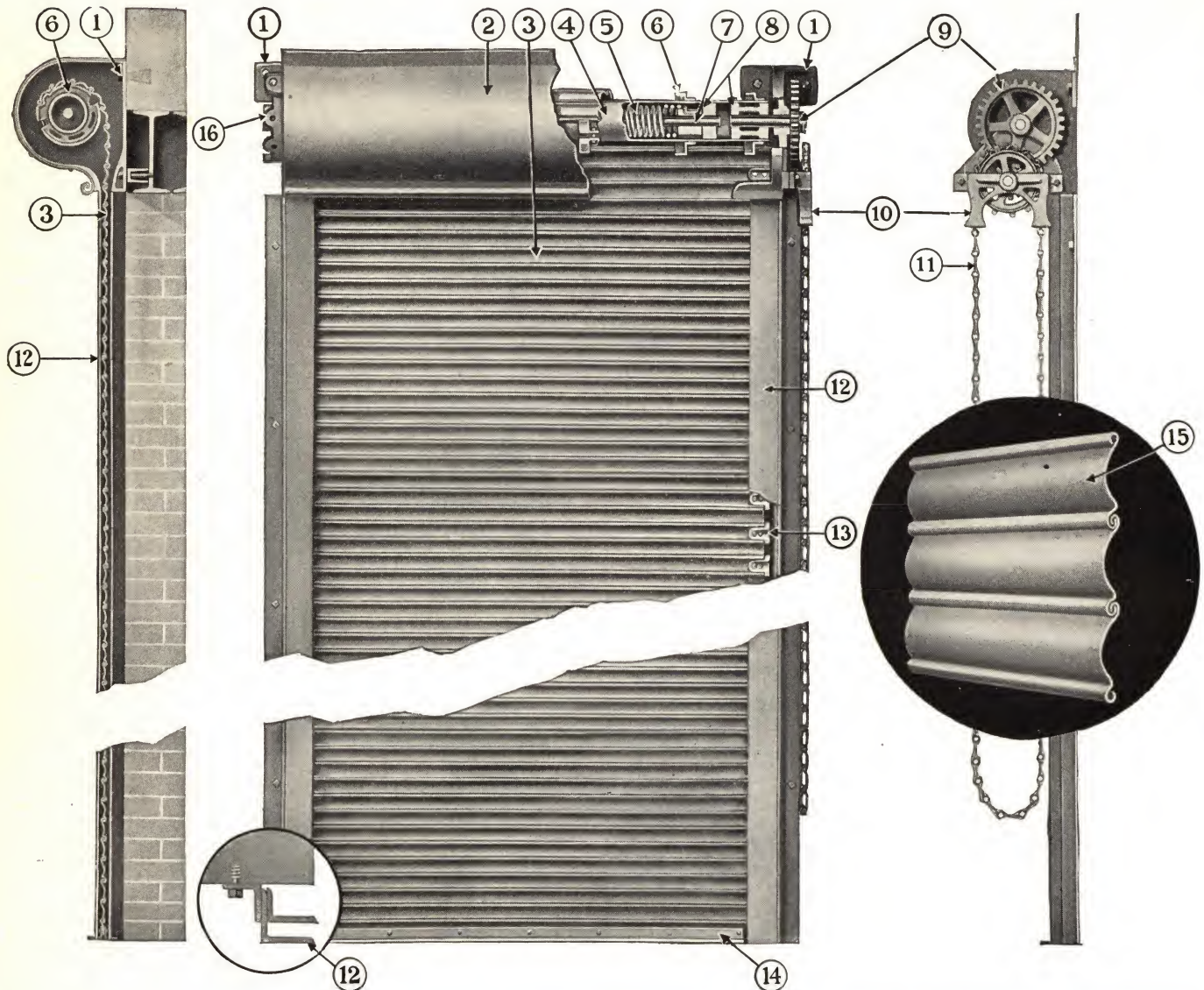
1 manual For the smaller sizes of doors or shutters mounted on face of wall, or in reveals provided in jambs, convenient lifting handles may be provided on the bottom plate. Counterbalance minimizes raising exertion. Doors with a maximum dimension of 12 ft. or an area of 100 sq. ft. are about as large as can be conveniently handled by this method.

2 chain For large doors, operation by hand chain, sprocket and gear may be provided. Estimated maximum pull required is 35 lbs. May be arranged for operation from either side of wall.

3 crankshaft When preferred, doors may be operated by a hand crank, shafting and gear on door side of wall, both sides of wall, or only on side opposite. Estimated maximum exertion required on the crank is 20 lbs. Crank is detachable to prevent operation of door.

construction features continued—→

construction features (cont'd)



A Kinnear Steel Rolling Door is a thoroughly developed piece of mechanical equipment.

The engineering skill and quality materials used in its fabrication are responsible for exclusive construction features which give it lasting efficiency and low maintenance cost.

Since so much of the value of a Kinnear Door is hidden under the hood, the discriminating purchaser will find of interest the construction points shown and described here. They permit an appraisal of the superior merits that make a Kinnear Door ultimately the lowest cost door to buy.

1 brackets Proportioned with large factor of safety and cast in special molds to give uniformity. Made of high-test gray iron. All surfaces smooth and even. Curtain mouth and stops at an established distance between center and back of

bracket, providing a throat which permits smooth operation without friction. Eliminates excessive drag of curtain over stops. Bearings of large proportions provided for barrel spindles.

2 hoods Neatly formed, hot galvanized sheet steel to fit contour of brackets. Suitable reinforced with heads or flanges to prevent deflection.

3 curtain Composed of interlocking slats of steel, hot galvanized. For slat details, see page 5.

4 spring barrel Each door is provided with a heavy steel barrel of sufficient diameter and thickness to avoid deflection in excess of .03 inches per lineal foot of barrel. This barrel serves a three-fold purpose, viz.:

1. Encases the counterbalancing mechanism.
2. Serves as the load-carrying beam.
3. Provides an axis around which curtain coils.

service type doors

5 counterbalance Oil-tempered helical springs wound from specially heat-treated steel provide a permanent means of counterbalance. All springs for each door are anchored to the same tension rod, which enables all springs to be adjusted uniformly and simultaneously.

6 rings Where door size requires, rings of malleable iron of involute shape are used and designed to coil the curtain with a uniformly increasing diameter.

7 shafting or tension rod Of cold-rolled polished steel to minimize friction in all bearings. Of ample size to carry the torsional load of the spring counterbalance.

8 barrel plugs Heavy cast iron, machined to fit perfectly into barrel ends. Specially designed to hold ends of spring, eliminating the usual excessive strains.

9 reduction gearing Suitable reduction gearing cast with teeth machine-molded from machine-finished patterns. Designed with a high factor of safety and a reduction ratio individually suited to the door operated.

10 chain guard Sprocket wheel guard guides hand chain and prevents it from leaving wheel.

11 operating chain Designed to prevent stretching and to provide a comfortable hand grip. Heavily galvanized.

12 guides Fabricated from structural steel angles. Especially adaptable for doors exposed to heavy wind pressure. Designed with groove depths varying from 2 to 8 in., depending upon width of door.

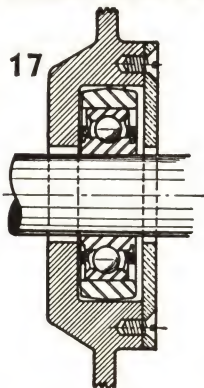
13 end locks Made of malleable iron and customarily placed on alternate slats. They retain slats in place, protect them against rubbing in the guides and maintain the curtain in alignment.

14 bottom bar Strengthens lower part of door and reinforces curtain against wind pressure. Made with two angles of equal weight in order to balance and hang freely on the curtain. Provides contact for curtain against sill when door is closed and against stops on bracket when door is open.

15 slats A most important feature of Kinnear Doors. For details see page 5.

16 adjustment wheel Mounted on outside of bracket. Initial tension of counterbalance springs is uniformly increased or decreased simultaneously by use of wheel. Heavy, cast iron construction.

17 high quality bearings Bearings at both ends of barrel which supports curtain are self-lubricating bearings, roller bearings, or grease-sealed precision ball bearings, depending upon requirements.



outstanding features

■ DESCRIBED below are a few of the outstanding features obtainable with Kinnear Steel Rolling Service Doors. Some are standard equipment, others special features available for use where special conditions make their use essential. Details of other auxiliary equipment will be submitted when involved on special door requirements.

windlocks

Endlocks are designed with a lug which engages with a locking bar attached to the guide. This prevents the curtain from leaving the guide because of deflection from excessive wind pressure or other causes. This type is provided wherever a door is 15 feet or more wide and contains an area of 360 sq. ft. or more; and for all doors 24 feet or more wide. Otherwise the type of endlock shown on page 6 is provided.

locking

Manually operated doors are locked by padlocking the slide bolt, which engages in a slot in the guide, or to a clip welded on the bottom plate of the door. This can be arranged for locking on either side of the door.

Chain operated doors are locked by padlocking the chain against a "keeper" applied to the jamb.

Crank shaft operated doors are locked by placing a padlock through one of the holes on the wheel placed above the crank box. A lug on the crank box casting engages with the lock and prevents the shaft being turned.

Motor operated doors are locked by either a key-operated control button, such as described on page 10, or by breaking the switch on the power line and locking emergency hand chains, with padlock, to a keeper on the wall.

weatherproof provision

This patented Kinnear feature affords complete weather protection when required for the bottom and groove construction of a steel rolling door. By means of weatherstrip or webbing in the grooves, infiltration of water in the grooves is minimized and diverted to a drainage slot in the sill.

The bottom angle is also arranged to seat in this slot, thereby preventing water seepage at the bottom of the door.

intermediate movable post

Frequently, large openings can be more easily closed by a number of doors rather than one large one. When this is advisable, movable guiding posts with the edges constructed to form double grooves may be used. Hinged to the bracket, these posts are swung up out of the way when the doors are open. Normally this is accomplished perpendicularly to the plane of the curtain but can be arranged a) to swing obliquely, b) to slide to the side of the opening, by a trolley on a horizontal overhead track; c) by other methods suited to the individual requirements. Further details will be furnished on request.

installation types and clearances →

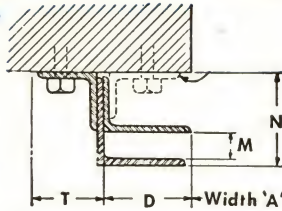
installation types and clearances

The data on these two pages give clearances for various heights and widths of doors in the more commonly used non-electrically operated installations. Motor controlled installations are on page 13. When the coil is mounted on the face of the wall, the brackets and coil are entirely above the bottom of the lintel and the edges of the guides are clear of the face of the opening

jamb. Where headroom is limited, the door is mounted in the opening and the brackets and coil located on the jambs or in reveals provided in the jambs. Since each door is especially assembled, a Kinnear engineer is often able to suggest ways of locating the mechanism to obtain better concealment of the working parts or recommend variations of mechanism.

clearance for curtain guide

Slat No. 2 is usually used on doors of the sizes listed above the heavy line (under 13 ft. width) in the tables, Slat No. 4 on sizes below the heavy line.

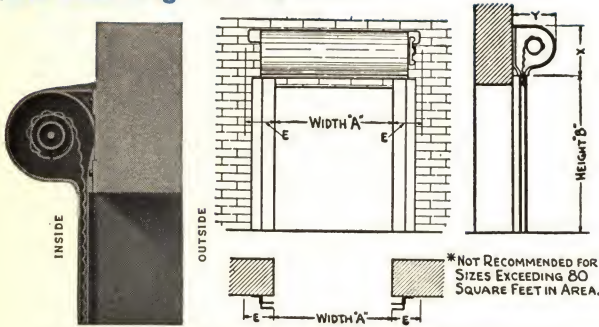


width A, ft.		D, in.	M, in.	N, in.	T, in.
Slat No. 2	to 11 incl.	25/16	7/8	3 1/2	2 1/2
	over 11 to 14	2 13/16	7/8	4	2 1/2
Slat No. 4	14 to 17	2 13/16	1 1/8	5	2 1/2
	over 17 to 22	3 1/4	1 1/8	5	2 1/2
	over 22 to 24	3 3/4	1 1/8	5	3
	over 24 to 32	4 5/8	1 5/8	6	4
	over 32 to 40	4 5/16	1 5/8	6	4

Note: Schedule at left gives guide clearances required and slats required for doors of various widths. For slat detail, see page 5.

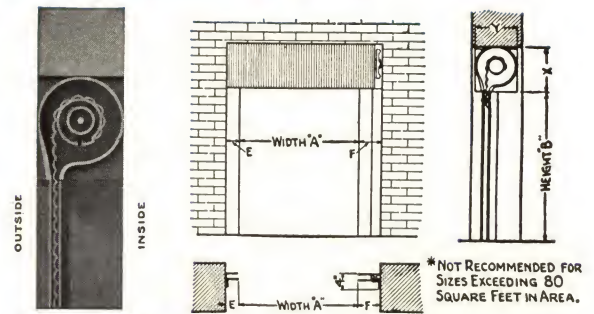
manual operation

face mounting FM-10



height B, ft.	6			7			8			9			10			11			12		
width A, ft.	X	Y	E	X	Y	E	X	Y	E	X	Y	E	X	Y	E	X	Y	E	X	Y	E
3, 4	15	11	5	17	13	5	17	13	5	19	15	5	19	15	5	20	16	6	20	16	6
5	15	11	5	17	13	5	17	13	5	19	15	5	19	15	5	20	16	6	23	19	6
6	15	11	5	17	13	5	19	15	5	19	15	5	19	15	5	23	19	6	23	19	6
7	15	11	5	17	13	5	19	15	5	19	15	5	21	17	6	23	19	6	23	19	6
8	15	11	5	17	13	5	19	15	5	21	17	6	21	17	6	23	19	6	23	19	6
9, 10, 11	15	11	5	18	14	5	20	16	6	21	17	6	21	17	6	23	19	6	23	19	6
12	15	11	6	18	14	6	20	16	7	21	17	7	21	17	7	23	19	7	23	19	7

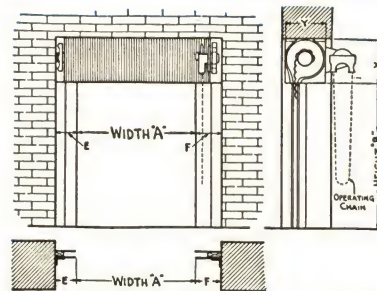
under lintel mounting BM-10



height B, ft.	6	7	8	9	10	11	12
width A, ft.	X Y E F	X Y E F	X Y E F	X Y E F	X Y E F	X Y E F	X Y E F
3, 4, 5	16 12 4 5	16 12 4 5	16 12 4 5	18 14 4 5	20 16 4 6	20 16 4 6	20 16 4 6
6, 7	16 12 4 5	16 12 4 5	18 14 4 5	18 14 4 5	20 16 4 6	20 16 4 6	20 16 4 6
8	16 12 4 5	16 12 4 5	18 14 4 5	20 16 4 5	20 16 4 6	20 16 4 6	20 16 4 6
9, 10, 11	16 12 4 5	18 14 4 5	20 16 4 6	20 16 4 5	20 16 4 6	20 16 4 6	20 16 4 6
12	16 12 4 6	18 14 4 6	20 16 4 6	20 16 4 6	20 16 4 6	20 16 4 6	20 16 4 6

chain hoist operation

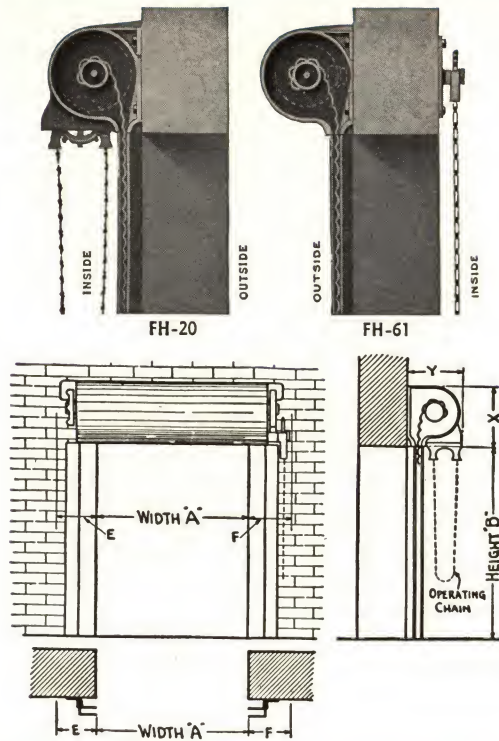
under lintel mounting BH-20



height B, ft.	8	9	10	11	12	13	14	15	16
width A, ft.	X Y E F	X Y E F	X Y E F	X Y E F	X Y E F	X Y E F	X Y E F	X Y E F	X Y E F
6, 7	16 12 5 6	18 14 5 6	18 14 5 6	18 14 5 6	18 14 5 6	18 14 5 6	18 14 5 6	20 16 6 8	20 16 6 8
8, 9, 10, 11	16 12 5 6	18 14 5 6	18 14 5 6	18 14 5 6	18 14 5 6	18 14 5 6	18 14 5 6	20 16 6 8	20 16 6 8
12, 13	16 12 6 7	18 14 6 7	18 14 6 7	18 14 6 7	18 14 6 7	18 14 6 7	18 14 6 7	20 16 6 8	20 16 6 8
14	16 12 6 7	18 14 6 7	18 14 6 7	18 14 6 7	18 14 6 7	20 16 6 8	20 16 6 8	20 16 6 8	20 16 6 8
15, 16	18 14 6 7	20 16 6 8	20 16 6 8	20 16 6 8	20 16 6 8	20 16 6 8	22 18 7 9	22 18 7 9	22 18 7 9
17	18 14 6 7	20 16 6 8	20 16 6 8	20 16 6 8	20 16 6 8	22 18 7 9	22 18 7 9	22 18 7 9	22 18 7 9
18, 19	18 14 6 7	20 16 7 9	20 16 7 9	20 16 7 9	20 16 7 9	22 18 7 10	22 18 7 10	22 18 7 10	22 18 7 10
20, 21	18 14 6 7	20 16 7 9	20 16 7 9	20 16 7 9	20 16 7 9	22 18 7 10	22 18 7 10	22 18 7 10	22 18 7 10
22	20 16 7 9	20 16 7 9	20 16 7 9	20 16 7 9	22 18 7 10				
23	20 16 7 9	20 16 7 9	22 18 8 10	22 18 8 10	22 18 8 10				

service type doors

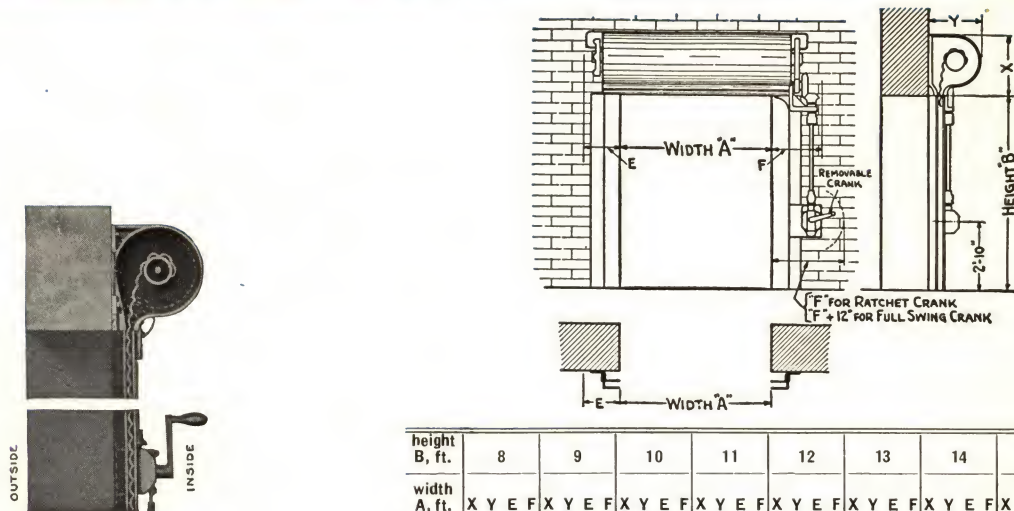
chain hoist operation face mounting



hgt. B, ft.	8	9	10	11	12	13	14	15	16
width A, ft.	X Y E F	X Y E F	X Y E F	X Y E F	X Y E F	X Y E F	X Y E F	X Y E F	X Y E F
6, 7, 8, 9	17 16 5 7	17 16 5 7	17 16 5 7	18 16 5 7	18 16 5 7	19 18 5 7	19 18 5 7	21 17 6 8	21 17 6 8
10, 11	17 16 5 7	17 16 5 7	17 16 5 7	18 16 5 7	18 16 5 7	19 18 5 7	19 18 5 7	21 17 6 8	21 17 6 8
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14	17 16 6 8	17 16 6 8	17 16 6 8	18 17 6 8	18 17 6 8	19 18 6 8	19 18 6 8	21 18 7 8	21 18 7 8
15	18 16 6 8	18 16 6 8	20 18 7 8	21 18 7 8	21 18 7 8	21 18 7 8	23 20 7 8	23 20 7 8	23 20 7 8
16	18 16 6 8	18 16 6 8	20 18 7 8	21 18 7 8	21 18 7 8	21 18 7 8	23 20 7 8	23 20 7 8	23 20 7 8
17	19 16 6 8	19 16 6 8	20 18 7 8	21 18 7 8	21 18 7 8	23 20 7 8	23 20 7 8	23 20 7 8	23 20 7 8
18	19 16 6 8	19 16 6 8	20 18 7 8	21 18 7 8	21 18 7 8	23 20 7 8	23 20 7 8	23 20 7 8	23 20 7 8
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22	20 18 7 8	20 18 7 8	21 18 7 8	21 18 7 8	23 20 7 8	25 21 8 9	25 21 8 9	25 21 8 9	25 21 8 9
23	20 18 8 9	21 18 8 9	21 18 8 9	21 18 8 9	23 20 8 9	25 21 8 10	25 21 8 10	25 21 8 10	25 21 8 10

hgt. B, ft.	17	18	19	20	21	22	23	24
width A, ft.	X Y E F	X Y E F	X Y E F	X Y E F	X Y E F	X Y E F	X Y E F	X Y E F
6, 7, 8, 9	21 18 6 8	21 18 6 8	23 20 7 8	23 20 7 8	23 20 7 8	25 21 8 9	25 21 8 9	25 21 8 9
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20	25 21 8 9	25 21 8 9	25 21 8 9	25 21 8 9	25 21 8 9	27 23 9 10	27 23 9 10	29 25 12 12
21	25 21 8 9	25 21 8 9	25 21 8 9	25 21 8 9	25 21 8 9	27 23 9 10	27 23 9 10	29 25 12 12
22	25 21 8 9	25 21 8 9	25 21 8 9	25 21 8 9	25 21 8 9	27 23 9 10	27 23 9 10	29 25 12 12
23	25 21 8 10	25 21 9 10	27 23 10 11	27 23 10 11	27 23 10 11	27 23 10 11	27 23 10 11	29 25 12 12

crank operation face mounting FC-20



height B, ft.	8	9	10	11	12	13	14	15	16
width A, ft.	X Y E F	X Y E F	X Y E F	X Y E F	X Y E F	X Y E F	X Y E F	X Y E F	X Y E F
6, 7	17 13 5 9	17 13 5 9	17 13 5 9	18 14 5 9	18 14 5 9	19 15 5 9	19 15 5 9	21 17 6 10	21 17 6 10
8, 9	17 13 5 9	17 13 5 9	17 13 5 9	18 14 5 9	18 14 5 9	19 15 5 9	19 15 5 9	21 17 6 10	21 17 6 10
10, 11	17 13 5 9	17 13 5 9	17 13 5 9	18 14 5 9	18 14 5 9	19 15 5 9	19 15 5 9	21 17 6 10	21 17 6 10
12	17 13 6 9	17 13 6 9	17 13 6 9	18 14 6 9	18 14 6 9	19 15 6 9	19 15 6 9	21 17 7 11	21 17 7 11
13	17 13 6 9	17 13 6 9	17 13 6 9	18 14 6 9	18 14 6 9	19 15 6 9	19 15 6 9	21 17 7 11	21 17 7 11
14	17 13 6 9	17 13 6 9	17 13 6 9	18 14 6 9	18 14 6 9	19 15 6 11	19 15 6 11	21 17 7 11	21 17 7 11
15	17 13 7 10	18 14 7 11	21 17 7 11	21 17 7 11	21 17 7 11	21 17 7 11	23 19 7 11	23 19 7 11	23 19 7 11
16	18 14 7 11	18 14 7 11	21 17 7 11	21 17 7 11	21 17 7 11	21 17 7 11	23 19 7 11	23 19 7 11	23 19 7 11
17	19 15 7 11	19 15 7 11	21 17 7 11	21 17 7 11	21 17 7 11	23 19 7 11	23 19 7 11	23 19 7 11	23 19 7 11
18	19 15 7 11	19 15 7 11	21 17 7 11	21 17 7 11	21 17 7 11	23 19 7 11	23 19 7 11	23 19 7 11	23 19 7 11
19	19 15 7 11	19 15 7 11	21 17 7 11	21 17 7 11	21 17 7 11	23 19 7 11	23 19 7 11	23 19 7 11	23 19 7 11
20	19 15 7 11	19 15 7 11	21 17 7 11	21 17 7 11	21 17 7 11	23 19 7 11	23 19 7 11	23 19 7 11	25 21 8 11

Dimensions above are for general reference only and not for construction purposes.

specifications →

specifications

for service doors

openings Shall be equipped with Kinnear Steel Rolling Doors.

curtain Shall be of interlocking slats, rolled not drawn, formed in easy curves without sharp bends, from open hearth steel (for gauge see table below). Slat to be of section sufficiently large to give curtain strength to safely resist a wind load of 20 lbs. per sq. ft. For doors exceeding 25 ft. in clear width or 15 ft. clear width if door exceeds 22 ft. in height, curtain shall be provided with lugs as windlocks to engage bars in guides and to lock the curtain against wind pressure. Each alternate slat shall be fitted with malleable endlocks $\frac{3}{8}$ in. thick. Bottom bar to be two angles placed back to back.

Note: The gauge of the slats to be specified according to the table below.

galvanizing To be hot process, free from blisters and other imperfections, with a high grade pure zinc coating.

counterbalance Curtain to be coiled on a pipe of size sufficient to carry the door load with a deflection not to exceed .03 in. per ft. of opening width, and to be evenly balanced by helical springs contained in pipe.

coil brackets To be of high grade iron designed to house ends of the coils.

hood The coil to be housed with a sheet metal hood No. 22 U. S. gauge for doors over 20 ft. wide and No. 24 U. S. gauge for narrower sizes.

guides Built of structural steel to form a slot of sufficient depth to retain curtain in guides, against heavy wind pressure, and for doors requiring windlocks, guides must be provided with anchors for windlocks.

gear To be of best grade gray iron, cast teeth machine-moulded from machine-cut patterns, except machine-cut teeth on motor operated doors.

for electric operators

General Notes—Complete current characteristics should accompany all requests for quotations. The wire, conduit and fuses which the installation of power operation necessitates are not furnished or installed by The Kinnear Manufacturing Company, but are to be provided by others in accordance with wiring diagram supplied by Kinnear.

operation Doors to be operated by means of an electric motor. The control circuit shall be closed by means of push buttons and automatic limit switches that will break the circuit at termination of travel. Door to be stopped at intermediate points by stop button from where it can then be operated in either direction.

motor To be high starting torque elevator or hoist motor, raising or lowering curtain at approximately .67 ft. per second.

reduction gear Of the power unit shall be machine-cut gear completely housed and running in oil bath.

emergency operation A control for automatically engaging a sprocket and chain and releasing the brake, shall be operable from the floor. A device which shall automatically prevent the motor from operating until emergency sprocket is disengaged shall be provided. Emergency operation shall not affect timing of limit switch.

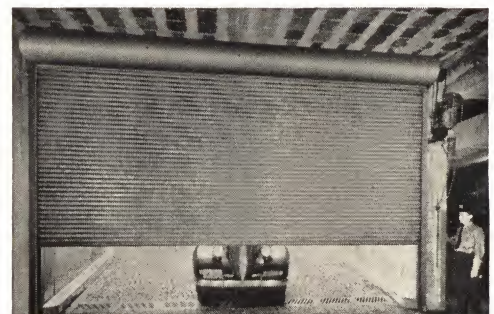
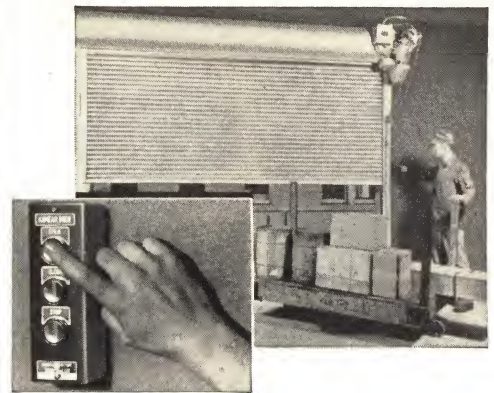
control switches Shall consist of 3 push-button switch "Open," "Close" and "Stop" remote control magnetic enclosed switch panel for reversing motors, and automatic limit switch.

erection All doors shall be erected by the manufacturer or his authorized representative and shall be guaranteed for a period of one year from the date of completion of erection that any part defective in material or workmanship will be replaced without charge to the customer.

table of slat gauges

Height	Width	U. S. Gauge
0 to 8'-0"	0 to 13'-6"	22
	13'-6" to 20'-0"	20
	20'-0" to 30'-0"	18
	30'-0" up	Refer to Factory
8'-0" to 12'-0"	0 to 12'-6"	22
	12'-6" to 20'-0"	20
	20'-0" to 30'-0"	18
	30'-0" up	Refer to Factory
12'-0" to 28'-0"	0 to 12'-6"	22
	12'-6" to 18'-0"	20
	18'-0" to 30'-0"	18
	30'-0" up	Refer to Factory

electric power operation



power units

ROLLING DOORS offer their greatest economy and convenience when equipped with Kinnear Power Units—compact, rugged and dependable electric motor operators individually adapted to any Kinnear Rolling Door. Controlled by the desired number of conveniently located push-button control stations, Kinnear Motor Operated Doors are quickly opened or closed. The saving in labor, time and heat in winter will return substantial dividends on the initial investment.

Kinnear power equipment is designed so that existing manually operated doors can be economically motorized at anytime. This gives all the benefits of motor operation at moderate expense, and permits modernization of doors that were installed with other types of operation. In view of the savings of motor operation, every user of a Kinnear hand operated Service Door should investigate the possibilities of adding an electrical power operator.

operation

Operation of the door is accomplished by a momentary contact of the "Open" or "Close" button on the control switch. At the termination of the door travel, a limit switch automatically stops the motor and sets the brake. The door can be stopped at any intermediate position by pushing the "Stop" button, from which position it can then be either raised or lowered.

Kinnear Power Units embody many improved features not to be found in any other equipment on the market. One feature of prime importance is the Emergency Manual Operation.

improved design

1. integral construction Integral unit construction with fewer moving parts and no misalignment, insures greater efficiency, quieter operation, less maintenance and easier erection.

2. high quality gears Worm gears are of bronze, while worms are of polished and hardened steel. All gears are machine cut.

Where chain drives are employed, they are high grade roller chains operating on cut tooth sprockets.

3. bearings to fit the service Good bearings are liberally used in this unit and are of types that experience has proved to be desirable for the service. These are precision ball bearings; bronze bushings with lubrication facilities and grease seals; and bronze and graphite oilless bearings.

4. adequate oiling Large sealed oil reservoirs insure adequate oiling for parts receiving the greatest wear, with a minimum of attention.

5. motor and control The motor is of the elevator or hoist motor type especially designed with torque outputs matched to the load requirements of the door.

Automatic control is foolproof and of different types to meet operating requirements.

6. especially engineered Every Kinnear Unit is especially designed and built to suit the particular door it is to operate.

7. backed by experience The Kinnear Unit is based on Kinnear's 45 years of experience in pioneering and specializing in the field of Upward-Acting Doors and Door Equipment.

advantages of motor operation

saves time Today it is essential to save man-time. Providing for remote control a motor operated Kinnear Door can be

opened or closed from any convenient station, thus permitting workmen at other tasks to control operation of the door. This saves going to and from the door or delegating one person exclusively to that task.

saves labor No effort is involved in opening or closing a motor-operated Kinnear Door. The only action required is to push a button to start the door up or down. It even stops itself.

increases protection Because of the ease of raising and lowering, there is no temptation to leave the door open rather than go to the trouble of closing it and reopening it later. This is especially true when a door must be used several times a day or when the operator knows it will be used again in a few minutes. The oftener an opening is used, the greater is the need of motor-operation to make certain the door is closed when it should be and not open to the elements and to thieves.

saves heat Every time a door is opened in winter a large amount of heated air is lost. Wasted heat is wasted money. A motor operated door shortens the period of loss during each cycle and also, because it is not left open so much, conserves heat. It not only saves heating expense but maintains a more even and comfortable temperature.

allows remote control The control station can be located near or away from the door and so arranged as to meet any particular operating requirements. One man can easily control a number of doors simultaneously.

pays for itself On new doors or in modernizing old ones, an electric power operator gives the advantages of quicker, easier and more satisfactory operation at the same time as it is earning its purchase price in the savings it makes.

controls for electric operators

control stations While practically any type of automatic control switch can be applied to Kinnear Motor Operated Doors, the most generally used is the standard station, equipped with three push buttons, labeled, "Open," "Close," and "Stop." For use by only authorized persons, a control station can be supplied that has "Open" and "Close" buttons operated only by a key.

Other types of control can be supplied if information is furnished to enable Kinnear to recommend equipment suited to the requirements.

emergency manual operation Interruption of current does not stop the operation of a motorized Kinnear Door. Emergency manual operation can be brought into play quickly and the door opened or closed by chain hoist control.

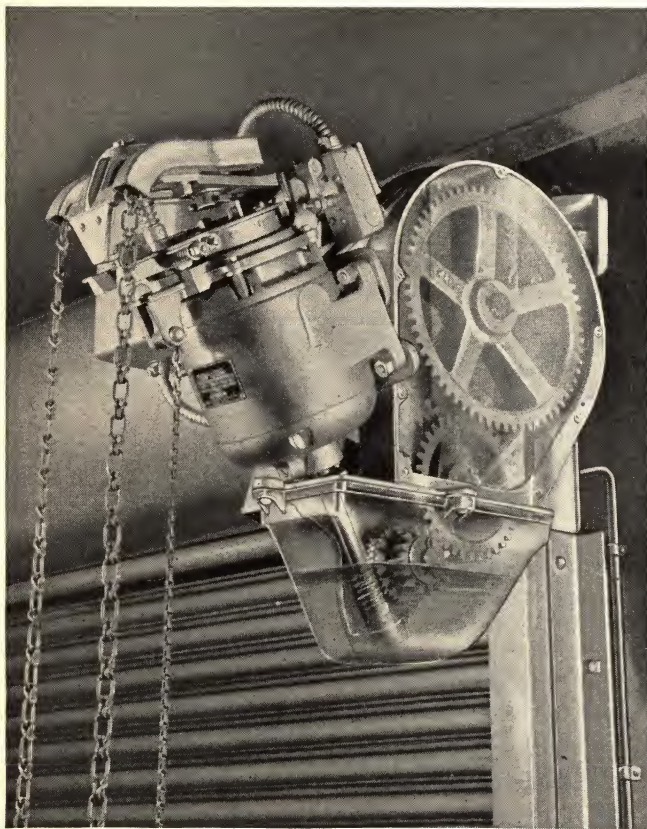
When current is again available, power unit is easily and quickly returned to normal electrical operation by pulling down on a conveniently located release chain.

Kinnear safety device Another Kinnear development that adds materially to the safety of Motor Operated Doors is a compressible weatherstrip that is placed along the entire length of the bottom edge of the door. In case the door should descend upon an obstruction as it is lowering, it compresses this weatherstrip, and causes the door either to stop its closing travel, or immediately to revert to its fully open position. A very moderate pressure on the weatherstrip insures positive action.

It minimizes the possibility of injury to persons or cars in case the door is lowered by attendants who fail to note whether or not the opening is completely cleared when they push the control button. This is furnished at additional cost.

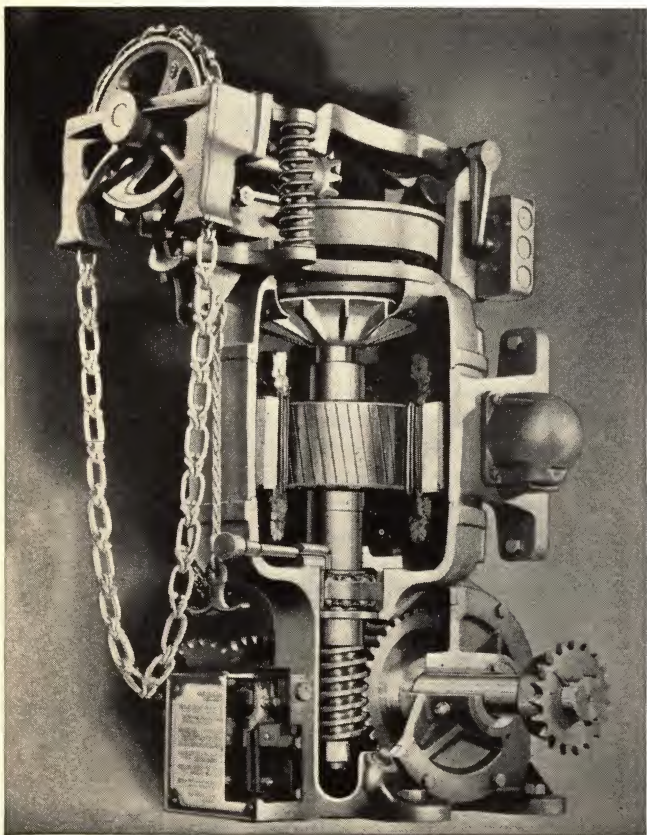
electric power operator, continued—→

electric operators



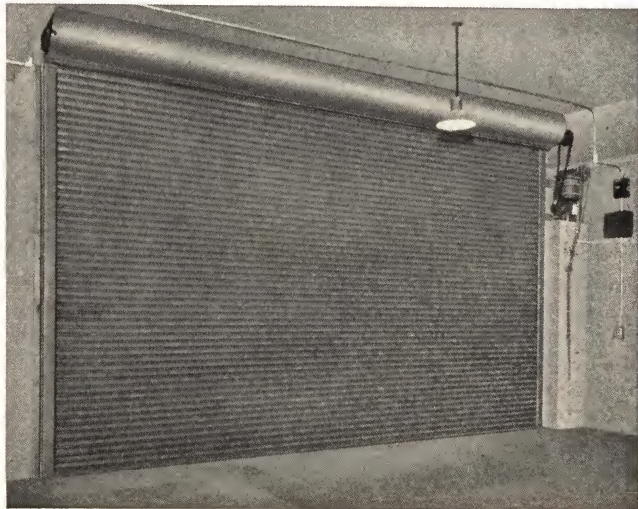
bracket mounted type "A"

The Kinnear Type "A" Bracket Mounted Power Unit is attached to the bracket in which the curtain coil is journaled and is so compactly arranged that it requires little more space than a chain operated door. Note illustration. It is especially designed—in two different sizes—for doors not exceeding 22 ft. high or 20 ft. wide, having a maximum area of approximately 210 sq. ft., of No. 20 U. S. gauge curtain. It's an operator that may be added to existing manually operated Kinnear Doors. When installing doors that may later be motorized, it should be made certain that sufficient clearances are kept available.

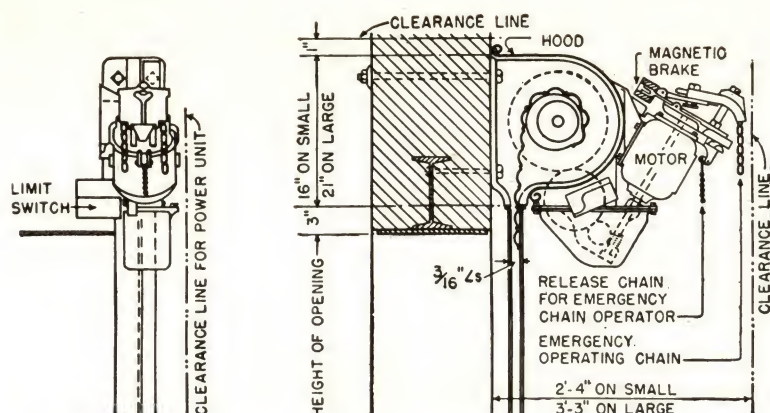


wall mounted type "B"

The Kinnear Type "B" Wall Mounted Power Units are especially designed for handling larger doors than the Type "A" Unit; or doors exceeding 22 ft. high or 20 ft. wide having an area of more than 210 sq. ft., of No. 20 U. S. gauge curtain. However it is also designed for greater flexibility of mounting—see variations of mounting on the following page—providing for conditions where obstructions or limited clearances prevent mounting in the more conventional manner. As the illustration at left shows, it is a neat, compact, heavy-duty unit that embodies the highest quality construction features that can be found in electric power equipment.



service type doors



NOTE: Clearances given are for estimating purposes only. They are only approximate, varying somewhat in each case, because every Kinnear Motor Operated Door is especially engineered for the individual requirement.

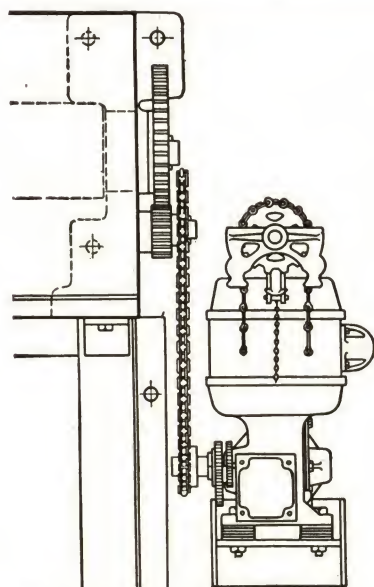


Advantage of "Raising-Out-of-the-Way" is even more evident in large openings through which motor vehicles are continually passing.

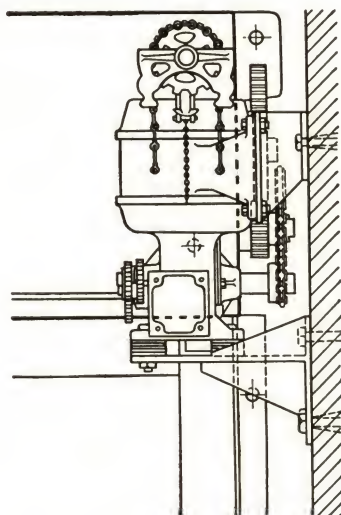
bracket mounted—type "A" A rugged gear-driven unit available for any type of electric current. All the mechanism (motor, reduction gearing, magnetic brake, limit switch and emergency manual operation) is so compactly arranged as to require little more room than a manually operated door.

Furnished in two sizes 1) The

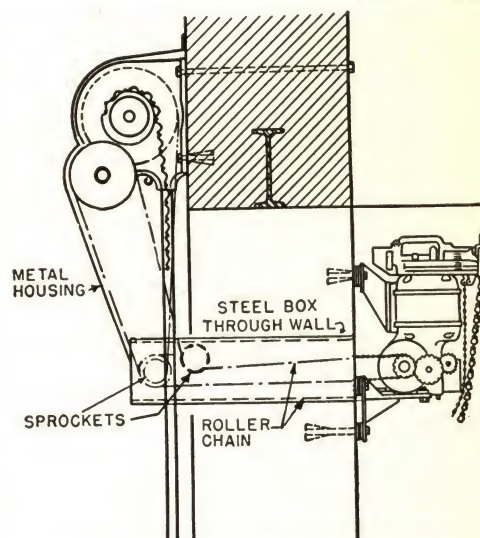
smaller with special $\frac{1}{8}$ Hp. motor is limited to doors not exceeding 15 ft. high, or 12 ft. 6 in. wide and having maximum area of approximately 140 sq. ft. of No. 22 U. S. gauge curtain, 2) The larger with 1 Hp. motor is limited to doors not exceeding 22 ft. high or 20 ft. wide having maximum area of approximately 210 sq. ft. of No. 20 U. S. gauge curtain.



Power unit located below top door.



Wall Mounting
Unit close-coupled to door mechanism.



WHERE CONDITIONS REQUIRE, SHAFT & GEARS
CAN BE SUBSTITUTED FOR THE CHAIN DRIVE
Unit located on wall opposite door.

wall mounted—type "B" A remarkably flexible unit for different current characteristics. Usually it is furnished with a roller chain and sprocket drive from the motor element to the gearing that actuates the barrel on which the curtain coils. There are so many combinations of drive, power, location of motor, mechanism and control, that a Kinnear Power Unit can be adapted to a wide variety of doors and opening re-

quirements. The three types of mounting shown above, which are the most typical applications, are shown for illustrative purpose only, not for exact details. Consult Kinnear for specific recommendations.

Sizes and applications of the Wall Mounting type are for doors exceeding the sizes covered by the Bracket Mounted type.

fire doors and shutters—→

KINNEAR
ROLLING DOORS

Kinnear fire doors and shutters

KINNEAR Fire Doors and Shutters are inspected at the factory by the Underwriters' Laboratories, Inc., and when built within the size limits listed below, bear the required Underwriters' Label. The significance of the Underwriters' Label is explained in the following quotation taken from the Underwriters' Laboratories, Inc. code book:

"The label serves as evidence of inspection at the factories by Underwriters' Laboratories, Inc. and signifies compliance of the product with the requirements of the Laboratories by fire

test. The protection of an opening depends not only upon use of a labeled assembly, but also upon the installation of all parts in a standard manner."

For the owner to benefit from maximum savings in insurance rates and maximum fire protection, it is essential that all automatic fire doors installed bear the required label of Underwriters' Laboratories, Inc.

To be certain of an acceptable and rated fire guard always specify that all fire doors shall bear the Underwriters' Label.

recommended models

In the illustration (below, right) is a key to Kinnear model numbers and an explanation of the drawing which illustrates different conditions of location and exposure and shows the class of label required. For the different situations described, the specific Kinnear model recommended is given below.

condition A In fire walls.

Openings (not to elevator or other shafts).

Use in fireproof buildings Kinnear Model FHA or FCA on openings exceeding 80 sq. ft. in area and Model FMA on those smaller. In non-fireproof buildings requiring between-jamb mounting, substitute B for F in the first letter of the model given above.

condition B In vertical shafts (such as elevator, escalator, and stair wells) not in fire walls.

Openings exposed to risks from inside or outside the shaft. Use, in fireproof buildings, Kinnear Model FCB on openings exceeding 80 sq. ft. in area and Model FMB on smaller ones. For non-fireproof buildings requiring between-jamb mountings, substitute B for F in the first letter of the model given above. We do not recommend rolling doors for stair wells, as a hinged door swinging out should be used if possible.

condition C In room or corridor partitions.

Openings exposed to risks from either side of interior partition walls.

condition D In exterior walls.

D. Openings exposed to risks from adjacent buildings. Use Kinnear Model FHD or FCD on openings exceeding 80 sq. ft. in area, and Model FMD on smaller ones. For condition calling for between-jamb mounting use Model BHD or BCD in the former situation and BMD in the latter.

DS. Windows exposed to risks from adjacent buildings, or, in the court, to risks from other sections of the same building. Use Kinnear Superior Window Fire Shutter described on page 17.

condition Z In fire walls.

Openings to elevator shafts in fire walls.

1. On Standard Shafts—Each opening in standard shafts communicating with more than one building or section of a building shall be provided with a fire door suitable for Class A or B condition.

2. On Sub-Standard Shafts—Each opening in sub-standard shafts communicating with more than one building or section of a building shall be provided with an approved fire door for Class A or B condition, and in addition, each opening into the shaft, through the fire wall shall be provided with an approved door for Class A condition. Thus, two doors are required for each opening in a fire wall into a sub-standard shaft.

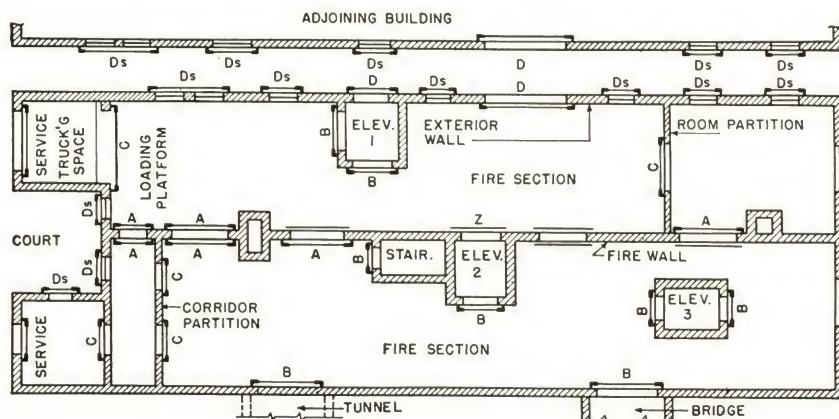
note In Class A, B or C conditions, doors

mounted on the face of the walls should usually be confined to fireproof buildings where there is little, if any, danger of the collapse of the building and injury to the door from falling materials.

caution Since fire protection regulations vary in different localities and the existence of automatic sprinkler systems often modify door requirements, it is advisable to consult the rating bureau having jurisdiction to ascertain the exact type of installation that will be required. This is also necessary because the rulings of the Underwriters' Laboratories and other rating bureaus are subject to change.

It should also be noted that dimensional requirements for Steel Rolling Fire Doors and Shutters bearing the Underwriters' Laboratories' standard label have been recently changed from 80 sq. ft. to 120 sq. ft.

Call on Kinnear for consultation when considering fire doors or window shutters for any condition. Their half century of experience and wide range of models assure effective fire protection at the minimum cost.



selecting the right model

key to model numbers recommended for conditions illustrated on drawing above
To identify the Kinnear models recommended for particular conditions in the accompanying text, the following letters are used:

model

- F—Face-of-wall mounting.
- B—Between-jamb mounting.
- M—Push-up type operation.
- H—Chain type of operation.
- C—Crank type of operation.
- R—Rewind method of operation.
- S—Super-imposed bracket arrangement.
- T—Arrangement for operation through the wall.

Example: Kinnear Model FHD is a door mounted on face of wall (Letter F), having Chain Type operation (Letter H), having Underwriters' Class D Label (Letter D).

Underwriters' labels

class A labels. Openings in fire walls. Must not exceed 120 sq. ft.; the width or height not to exceed 12 ft.

class B labels. For openings in vertical shafts, such as elevator shafts. Size limitations the same as in Class A.

class C labels. For openings in corridors or room partition walls. Size limitations the same as in Class A.

class D labels. For openings in exterior walls. Size limitations same as in Class A.

As Kinnear Fire Doors of larger sizes are built according to the same standards, the Underwriter will inspect and issue an oversize label on construction (with exceptions) for doors not exceeding 24 ft. in width or height.

labeled by Underwriters' laboratories for automatic closing

KINNEAR Underwriters' Fire Doors are designed primarily for fire protection purposes for openings that require Underwriters' labeled equipment and where insurance rates are a consideration.

Kinnear Fire Doors not only comply with the standards of the Underwriters' Laboratories, Inc. by fire test, they also comply with the requirements of the Uniform Building Codes of the various localities.

Closure from the open position in the event of fire, is by means of fusible links which release the automatic mechanism.

A safety device, or governor, controls downward travel of the curtain in automatic closure. This device is a protection to human life and eliminates the possibility of accident, impact on sills, rebound and the jamming of curtain slats which is common to doors without such controls.

The inner hood or baffle plate, operates automatically in case of fire, closing the space between hood and coil preventing the passage of flame or smoke from one area to another.

A Kinnear Fire Door is a silent constant guardian against fire. It can be built to fit practically all classes and sizes of openings in either old or new buildings.

Although provided with mechanism for automatic closure, and normally in the open position, Kinnear Fire Doors may be closed and opened for service door purposes at all times without releasing or interfering with the operation of the automatic mechanism.

They may be arranged for different types of operation when being used as Service Doors. These include manual hand lift, chain hoist or crank hoist. For details of installation and specifications see page 16.

If Kinnear Engineers are given the opportunity to work with the Architect, Engineer and Contractor during the designing of the building, it is possible to provide for complete concealment of all working parts of the door.



Above: Illustrates how a Kinnear Fire Door may be closed and opened for service door purposes without disturbing the automatic mechanism.



Above: This department store is provided constant fire protection by these Kinnear Fire Doors, installed in the fire wall.



Above: An installation of Kinnear Fire Doors in large openings. These doors bear the Underwriters' Oversize Label.



How a Kinnear Steel Rolling Fire Door protects an opening in a fire wall in a department store, without giving visible indication of its presence.



A Kinnear Fire Door on the side of the fire wall where the fire occurred. Fire did not pass this wall protected by two Kinnear Fire Doors.

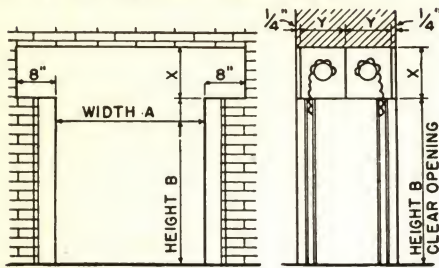


The opposite side of the wall shown above, illustrating how the two Kinnear Doors confined the fire to the side of the wall where it originated.

specifications—→

clearances for doors and shutters

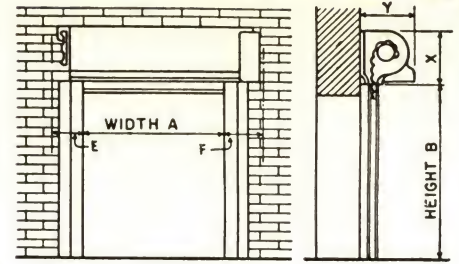
hand lift type: under lintel



hand lift type: under lintel

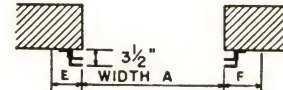
height B, ft.	6	7	8	9	10
width A, ft.	X Y	X Y	X Y	X Y	X Y
3, 4, 5	16 14	16 14	16 14	16 14	16 14
6, 7	16 14	16 14	16 14	16 14	16 14
8, 9, 10	16 14	16 14	16 14	16 14	16 14

hand lift type: face mounting

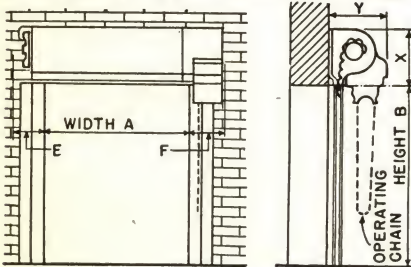


hand lift type: face mounting

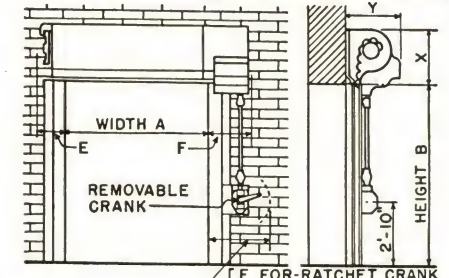
height B, ft.	6	7	8	9
width A, ft.	X Y E F	X Y E F	X Y E F	X Y E F
3, 4, 5	19 17 6 7	19 17 6 7	19 17 6 7	19 17 6 7
6, 7	19 17 6 7	19 17 6 7	19 17 6 7	21 18 6 7
8, 9, 10	19 17 7 8	19 17 7 8	21 18 7 8	21 18 7 8



chain hoist type: face mounting

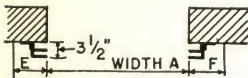


crank shaft type: face mounting



Note: Hand lift types not recommended for sizes exceeding 80 sq. ft. in area.

Note: All of the dimensions given on this page are for general reference only and not for construction purposes. Detailed information of any size and type of Kinnear Door or Shutter will be gladly furnished upon request.



chain hoist type: face mounting

height B, ft.	6	7	8	9	10	11	12
width A, ft.	X Y E F	X Y E F	X Y E F	X Y E F	X Y E F	X Y E F	X Y E F
5, 6, 7, 8	19 22 6 9	19 22 6 9	19 22 6 9	19 22 6 9	19 22 6 9	19 22 6 9	19 22 6 9
9	19 22 7 10	19 22 7 10	19 22 7 10	19 22 7 10	19 22 7 10	21 23 7 11	21 23 7 11
10	19 22 7 10	19 22 7 10	19 22 7 10	19 22 7 10	19 22 7 10	21 23 7 11	21 23 7 11
11, 12	19 22 7 10	19 22 7 10	19 22 7 10	21 23 7 11	21 23 7 11	21 23 7 11	21 23 7 11

crank shaft type: face mounting

height B, ft.	6	7	8	9	10	11	12
width A, ft.	X Y E F	X Y E F	X Y E F	X Y E F	X Y E F	X Y E F	X Y E F
5, 6, 7, 8	19 20 6 12	19 20 6 12	19 20 6 12	19 20 6 12	19 20 6 12	19 20 6 12	19 20 6 13
9	19 20 7 13	19 20 7 13	19 20 7 13	19 20 7 13	19 20 7 13	19 20 7 13	21 21 7 13
10	19 20 7 13	19 20 7 13	19 20 7 13	19 20 7 13	19 20 7 13	21 21 7 13	21 21 7 13
11	19 20 7 13	19 20 7 13	19 20 7 13	21 21 7 13	21 21 7 13	21 21 7 13	21 21 7 13
12	19 20 7 13	19 20 7 13	19 20 7 13	21 21 7 13	21 21 7 13	21 21 7 13	21 21 7 13

specifications—Kinnear fire doors and shutters

openings—Shall be equipped with Kinnear Steel Rolling Automatic Fire Doors.

label—All doors to bear the label of the Underwriters' Laboratories.

note: The Underwriters' Laboratories label and classify Kinnear Doors as Class "A" for fire walls, "B" for vertical shafts, "C" for corridors and room partitions and "D" for exterior walls, where the opening does not exceed in area 120 sq. ft. for Class "A", "B", "C" doors and Class "D" doors, or, in the latter (12 ft. in width or height). Door openings exceeding these dimensions in size and not exceeding 24 ft. 0 in. in either dimension are furnished with Underwriters' Oversize Label; window shutters not exceeding 15 ft. in either width or height. See page 17.

operation—All doors to be automatic closing in the event of fire. Doors not exceeding 8 ft. high or 80 sq. ft. in area can be operated by means of handles on the bottom bar, but larger sizes shall be operated through reduction gear by hand chain (or crank).

automatic closing device—To be thermally controlled by means of a fusible link. The door shall be forced to a closed position by release of a portion of the counterbalance springs. The door shall not be difficult to raise and reset after automatic closure.

counterbalance—Curtain to be evenly balanced by helical springs contained within spring barrel. Counterbalance to be such as to permit doors to operate easily for service purposes as well as for automatic closure in event of fire.

safety device where required—To be an automatic governor of

escapement type inoperative during normal operation but which shall so control the speed of the curtain during automatic operations as to prevent injury to persons accidentally under the door.

curtain—To be of Kinnear interlocking slats rolled from steel with no sharp bends and hot galvanized. The ends of the slats to be fitted with endlocks 3/8 in. thick. Gauge of metal and type of endlocks as established by Underwriters' Laboratories for the specified class of risk. Gauge of metal to be No. 20 U. S. gauge for Class "A", "B", and "C" doors and No. 22 U. S. gauge for Class "D" doors.

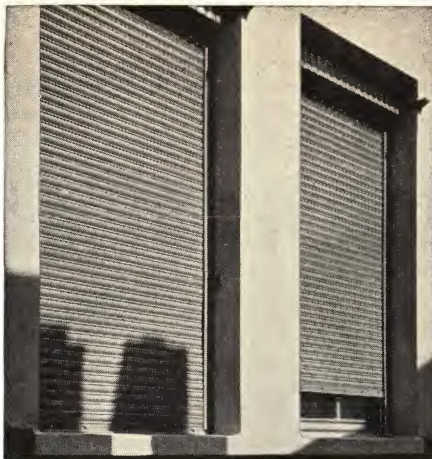
brackets—To be high grade iron with roller or ball bearings in bracket for revolving end of barrel.

guides—To be of structural steel 3/8 in. thick arranged for expansion at all rivet and bolt connections.

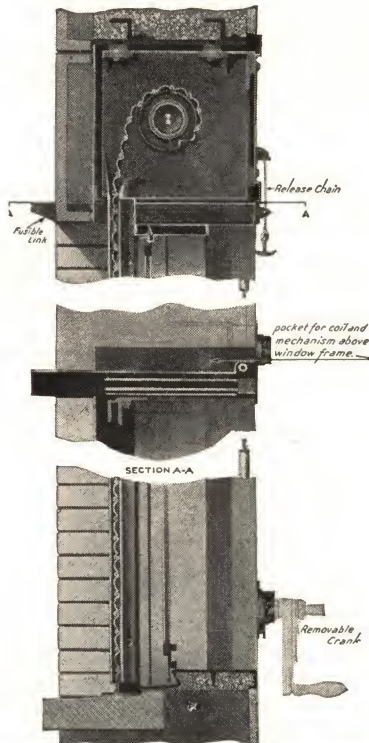
hoods—The coils to be enclosed with galvanized sheet metal housing of No. 24 U. S. gauge. For doors on interior wall, hoods to be furnished with a drop hood thermally controlled, closing against the coil when automatically released, but not interfering with coil during normal operation.

paint—All parts of the door except mechanism to be given one shop coat of red oxide; the mechanism to be dipped in flat black.

erection—All doors shall be erected by the manufacturer or his authorized representative and shall be guaranteed for a period of one year from the date of completion of erection, that any part defective in material or workmanship will be replaced without charge to the customer.



Illustrating how the operating mechanism can be completely concealed when a Kinnear Steel Rolling Fire Window Shutter is installed at time building is erected.



Note the removable crank and the release chain in the view at the left. This arrangement permits the shutter being easily tested or closed whenever desired. The crank operates the gearless rewind mechanism for raising and resetting the curtain.



Effective fire protection is provided for valuable records in this Court House with Kinnear Automatic Fire Window Shutters.

(labeled class "d" by Underwriters' Laboratories for automatic closing of exterior walls in case of fire)

KINNEAR "Superior" Fire Shutters are substantially the same in design as the Kinnear "Akbar" Fire Doors, except that they are not constructed for service raising and closing. They embody the same time-tested design, skilled workmanship and high quality materials as found in other Kinnear products. True to their name, they are superior shutters and will give full protection for many years. As can be seen from the illustrations, they can be almost completely concealed, particularly when installed at the time the building is constructed. For application on old buildings, the coil and brackets are mounted on the outside face of the wall, above the lintel.

To insure positive starting a powerful push-down spring gives the curtain a hammer-like starting blow of approximately 200 inch pounds simultaneously with the fusing of the releasing link. In an instant the curtain is lowering at full speed. A safety governor regulates the closing speed to eliminate all hazard of danger to a person and to prevent destructive impacts on the sill that might cause damage to the door or the building.

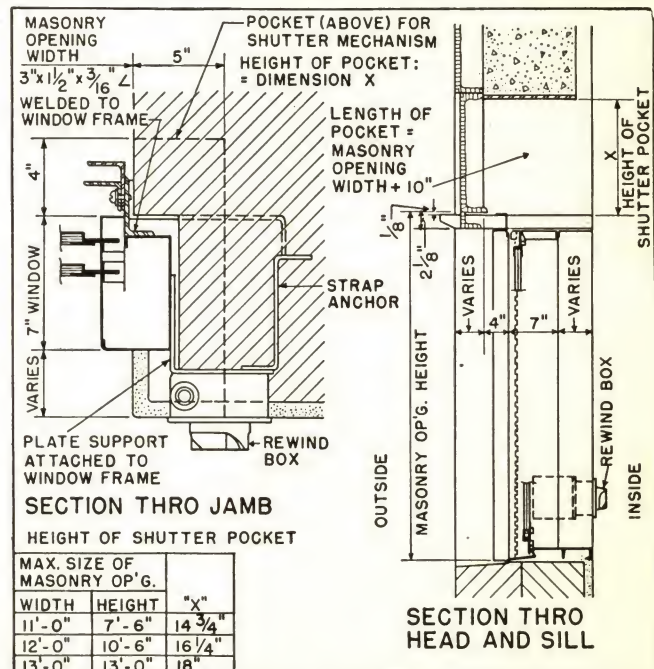
Provision is made for periodic testing. By the tripping of a release chain accessible from the inside wall, the shutter is closed the same as if it were automatically closed in case of fire. It can then be raised to the open position by a gearless rewind mechanism and a hand crank easily accessible from the floor. Crank is removed when not in use.

Superior Fire Shutters are constructed to the standards of the Underwriters and are labeled for exterior window openings not exceeding 120 sq. ft. in area, or more than 12 ft. in either width or height.

Superior Fire Shutters are ideal also for dark rooms, such as X-ray rooms in hospitals, etc. Many of them at this time being used for that purpose. Special recommendations will be submitted upon request.

outstanding features

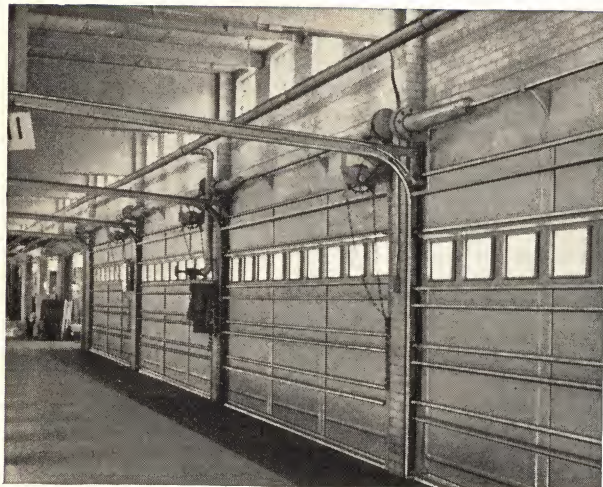
To assure years of dependable fire protection, "Superior" Shutters incorporate every feature that long Kinnear experience has shown to be desirable. Among these features are: (1) Certain, automatic closure. Immediately upon fusing of the releasing link, the powerful closing mechanism acts on the curtain with sudden force to set it immediately into rapid motion. (2) Safety governor to prevent excessive speed and to limit closing impact. (3) Releasing device to trip link lever and drop curtain. This facilitates testing, without bother or having to reset parts. (4) While normally open, they can be closed at any time by removing a releasing chain from a keeper located on the inside of the wall. (5) Rewinding device on the inside of the wall. By inserting and turning a crank, the shutter is raised and tension automatically restored on the push-down or motor spring. (6) Counterbalancing spring which is not affected by door testing or automatic closure and requiring no adjustment after once setting.



Kinnear steel RoL-TOP doors and steel rolling grilles—→

Kinnear RoL-TOP steel doors

for commercial, industrial and residential buildings



Like other Kinnear Doors, the RoL-TOP Door opens upward, affording maximum convenience, efficiency and permanence of service, combined with the advantage of the admittance of light.

Steel sections which have been given a heavy protective coating, are hinged together horizontally and fitted at both ends with heavy duty ball-bearing rollers. By means of these rollers, which operate in steel tracks or guides mounted on

the jamb and extending horizontally back from the lintel, the door rolls to the overhead horizontal position. One, or more springs connected to the door by plow steel cable, accurately counterbalance the door.

A special sealing device and heavy cylinder lock make the door weather-tight and burglar-proof. It can be arranged for operating manually, mechanically or electrically. Sections can be either solid or arranged for glass.

typical uses

It is ideally suited for warehouse service doors, factory receiving platforms, boathouses, old or new residence garages, service stations, and other buildings. The clean cut, straight line design of the Steel RoL-TOP harmonizes with almost any architecture.

advantages

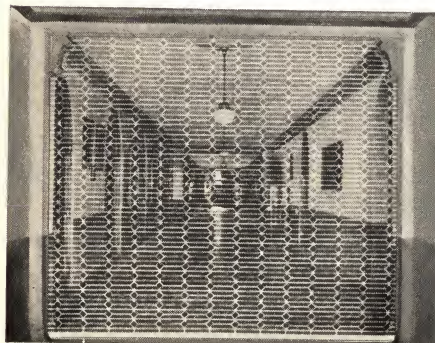
RoL-TOP has many advantages. It rises over snow, ice or any obstruction. When raised, it is out of the way of persons, cars, wind and rain. It stays where it is put and cannot run down or blow shut. It saves wall and floor space and permits cars or other objects to be placed within a fraction of an inch of the door. It opens easily, rapidly and smoothly; does not sag, stick or bind. It also has the fire and burglar-resisting qualities of the Kinnear Steel Rolling Door. Sturdy construction insures long life.

Kinnear steel rolling grilles

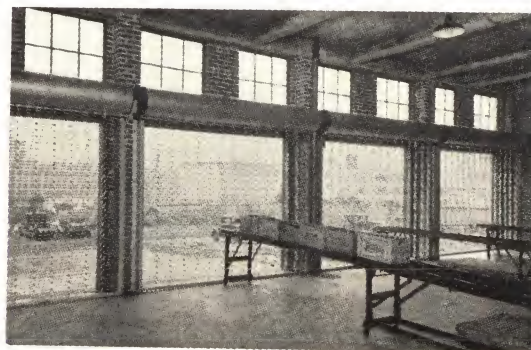
For protection against strikers, rioters, burglars or other marauders, Kinnear Steel Rolling Grilles offer an ideal solution. Efficient in operation, attractive in design, they harmonize with every type of building. Operating on the same principle as Kinnear Steel Rolling Service Doors described in detail on pages 6 to 10, Kinnear Steel Rolling Grilles are permanently installed. They are remarkably strong when closed and locked,

and yet when not needed may be easily raised, disappearing from sight.

Because they give positive protection without sacrificing light, vision, air and ventilation, Kinnear Steel Rolling Grilles have wide application for interior and exterior use on concessions, store entrances and windows, vaults, corridor openings, courtyards, loading platforms and other openings in monumental, industrial and commercial buildings.



Left: A school corridor that is protected against trespassing with a grille. Concealed in the wall—unseen when not in use.



special doors

truck doors

Special Kinnear Steel Rolling Doors have proved for a number of years their worth and value to those demanding greater truck body efficiency. Rolling to a small compact coil a Kinnear Door requires practically no load-paying space and, when open, is out of the way. This permits backing the truck against a loading platform without damaging the doors or wasting the driver's time maneuvering end gates and old style doors. Merchandise is protected as the door need not be opened until the truck is stopped. The spring counterbalanced door

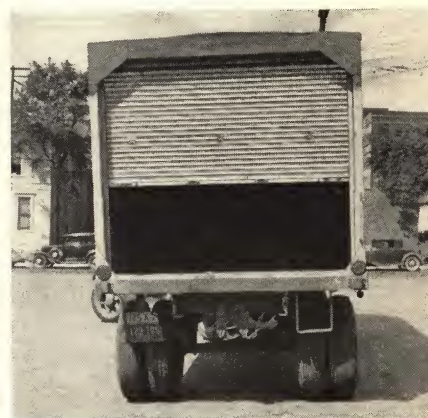
can be raised easily and quickly and provide a tight seal against the weather when closed.

Kinnear Doors are resistant to fire and burglars—and being less subject to damage than other type doors, effect considerable economy in maintenance. In case of damage, one or more slats can be quickly replaced. For a more complete description, see preceding pages.

Kinnear Doors are now designed for and being used on the ends or sides of various types of garbage collection trucks, small delivery trucks, and large transport trucks. Kinnear Engineers will gladly work with you or your body company in building doors to exactly meet your requirements.



Top left—four garbage disposal trucks equipped with Steel Rolling Doors. Top right—Kinnear Steel Rolling Doors installed on back of freight trailer. By opening vertical, truck can be backed up to loading dock before door is opened. This eliminates door damage which is frequent with old type doors. At left—Kinnear Steel Rolling Shutters on side of beverage delivery truck.

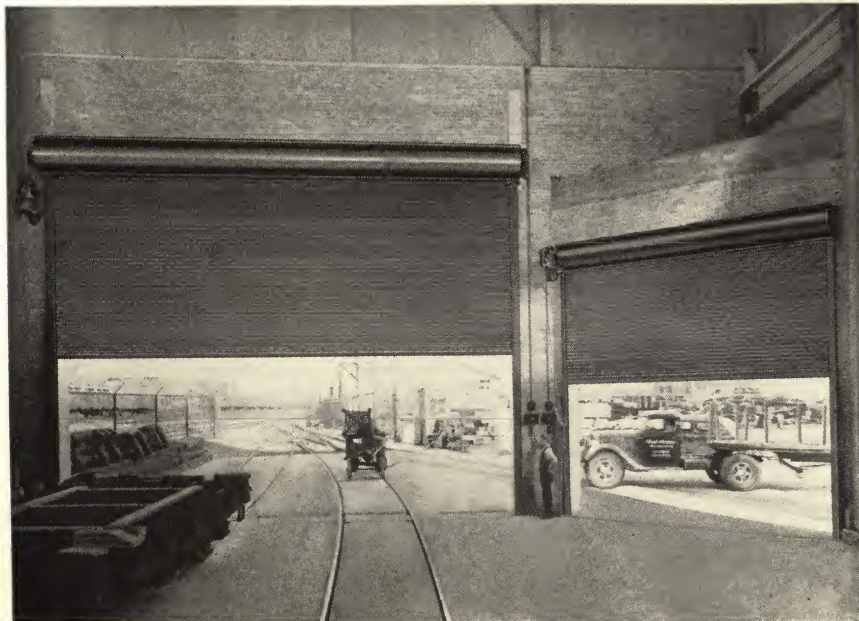


chemical plant and roundhouse doors

Kinnear Rolling doors built of aluminum interlocking slats or in wood are ideal doors for use in chemical plants, roundhouses or in buildings where acid fume conditions exist. They withstand the effects of chemicals present in the atmosphere as well as hard usage. Similar to other Kinnear doors they are built in any size with manual, mechanical or electrical control. They also offer the same economies and conveniences of steel Rolling Doors.



Shows 8 Kinnear doors, 12 ft. 5 in. x 17 ft. at Lima, Ohio, for the New York, Chicago and St. Louis Railroad Company.



Kinnear Steel Rolling Doors are especially suitable and adaptable where unusual or difficult opening problems exist. Requiring a minimum of space for mounting and operating, they can be built and installed to fit the individual opening.

Kinnear engineers are always ready to give technical advice and suggestions when desired.

At the left shows a situation where only a rolling door could be used because of the lack of side room and the arrangement of the two openings—demonstrates further the advantages of space economy of rolling doors.

KINNEAR
ROLLING DOORS



KINNEAIR IN SAN FRANCISCO

- | | | | |
|---------------------------------|--------------------------------|----------------------------------|---------------------------------|
| 1. Pier 27 | 9. St. Francis Hotel | 17. Pier 16 | 25. Field-Ernest Envelope Corp. |
| 2. Piers 21-23 | 10. Gump's | 18. The Emporium | 26. Piers 30-32 |
| 3. Treasure Island | 11. Union Square Garage | 19. Civic Opera House | 27. Schmidt Lithograph Co. |
| 4. U.S. Appraisers Stores Bldg. | 12. Standard Oil Co. of Calif. | 20. City Hall | 28. Western Merchandise Mart |
| 5. Pier 19 | 13. I. Magnin & Company | 21. Hibernia Sav. & Loan Soc. | 29. Piers 40-42 |
| 6. Pacific Tel. & Tele. Co. | 14. City of Paris Dept. Store | 22. The San Francisco Call-Bull. | 30. San Francisco Whse. Co. |
| 7. Pier 15 | 15. Veterans Memorial | 23. Walkup Dry & Whee. Co. | 31. M. I. B. Company |
| 8. Ferry Building | 16. Palace Hotel | 24. A. Schilling & Company | 32. Southern Pacific Station |

The above represents only a few of hundreds of time-tested installations in San Francisco

THE KINNEAIR MANUFACTURING COMPANY

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1742 Yosemite Avenue

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WASHINGTON 5, D.C., 332 Bond Bldg.

BOSTON 15, MASS., 6 Jersey Street

PHILADELPHIA 7, PA., 1321 Arch St.

DETROIT 3, MICH., 12330 Hamilton Ave.

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CHICAGO 6, Ill., 174 N. Wacker Dr.

CLEVELAND 15, OHIO, 3030 Euclid Ave.

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